

# ENGINEERING HERITAGE RECOGNITION PROGRAM

Proposal to nominate

## Steel Wings Windmill

as an Item of Engineering Heritage Interest



*Steel Wings Windmill – relocated and restored in Luke Park, Jerilderie, NSW.(photo by Chris Dahlitz)*

<b>Item Name:</b>	Steel Wings Windmill
<b>Other/Formal Names:</b>	Steel Wings, Steel Wings Vertical Windmill
<b>Locality:</b>	Jerilderie, NSW
<b>Address:</b>	Luke Park, Powell Street, Jerilderie.
<b>Co-ordinates</b>	Lat. -35.3544858, Long. 145.725124
<b>Current Owner:</b>	Murrumbidgee Council
<b>Original Owner:</b>	Sir Samuel McCaughey (famous Pastoralist and pioneer of the MIA)
<b>Current use:</b>	Tourist attraction
<b>Former use:</b>	Water pumping at “Goolgumbra” Station, 75 km North-West of Jerilderie
<b>Proposed use:</b>	Tourist attraction
<b>Item Condition:</b>	Very Good – relocated, reassembled and restored in 1979, refurbished in 1989 and 1998.
<b>Designer:</b>	Catherine Jane McMaster (B. 1859, D 1907) of Corfield, QLD. Patent registered 1905 (Australia, USA and Canada) – the only woman to have

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	patented an Australian windmill design.		
<b>Builder:</b>	Steel Wings Windmill Company, Sydney (1907 to 1911) – this example built in 1910.		
<b>Started:</b>	1910	<b>Restoration Completed:</b>	1979, 1989 & 1998
<b>History:</b>	<p>This Steel Wings Windmill was built in 1910 by the short lived Steel Wings Windmill Company (1907 to 1911) to a design patented in 1905 by Catherine Jane McMaster of Corfield, QLD. Sir Samuel McCaughey (famous Pastoralist, Politician and Pioneer of the Murrumbidgee Irrigation Area) purchased the windmill to pump water on his property “Goolgumbla” Station, 75 km North-West of Jerilderie. The Windmill was transported by train to Jerilderie, then bullock wagons to “Goolgumbla” where it was erected.</p> <p>The Steel Wings provided water to the Station homestead, ram sheds and dams along a 45km irrigation channel system until 1947. The windmill was damaged and collapsed in a severe windstorm in 1977, and the then owners of the Station (Dalgetys) offered it to Jerilderie as a historical exhibit.</p> <p>The windmill was relocated to Luke Park in Jerilderie in 1979 and restored to working order under the guidance of the Steel Wings Restoration Committee with funds from Lions, Apex and the Shire Council. Further restoration work was carried out in 1989 and 1998.</p> <p>Only six (6) Steel Wings Windmills were ever made, and this was the only working example Worldwide until 2004, when a second Steel Wings was re-erected at the township of Taroom in Queensland.</p>		
<b>Description:</b>	<p>The Steel Wings Windmill at Jerilderie is extremely large standing 50 feet high, with a 25ft diameter wheel (or fan), and a 24ft long tail piece. Its nose plate acts as a governor and automatically turns the machine out of high winds when required to save structural damage. It operates a 6" diameter plunger on a 19" stroke, lifting 2 gallons of water per revolution.</p> <p>The Steel Wings is unusual in its design in that the entire tower rotates to follow the wind unlike a conventional vertical windmills or wind turbine with a movable hub on a fixed tower. This requires a system of multiple stay wires to the top of the structure at a very shallow angle to provide clearance for the windmill to rotate.</p> <p>The Steel Wings design was made with 15, 20 and 25 feet wheels – the Jerilderie example being the largest size, whereas the Taroom example is smaller.</p>		
<b>Engineering Significance:</b>	<p>Because of their size and weight, and hence difficulty to transport (even as a disassembled kit), very few Steel Wings were built. Only six (6) were manufactured in the short life of the Steel Wings Windmill Company (1907-1911) and only two (2) are known to survive (Jerilderie and Taroom).</p> <p>The Steel Wings design is unconventional as the entire tower and blade structure rotate on a central spindle held by stay wires at a shallow angle – and hence it has a large ‘footprint’.</p> <p>The Steel Wings is also significant in that it is believed to be the only Australian Windmill designed by a woman</p>		
<b>Webpage Summary:</b>	This Steel Wings Windmill was built in 1910 by the short lived Steel Wings Windmill Company (1907 to 1911) to a design patented in 1905 by Catherine Jane McMaster of Corfield, QLD. Sir Samuel McCaughey		

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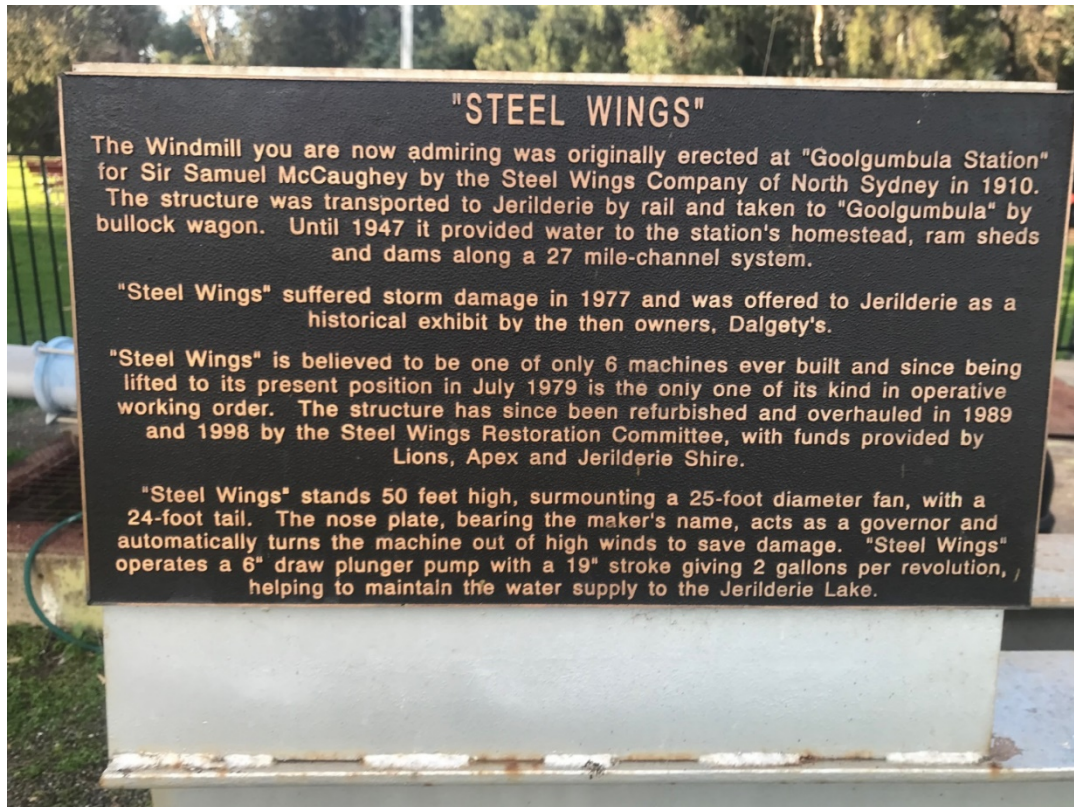
	<p>purchased the windmill to pump water on his property "Goolgumbra" Station, 75 km North-West of Jerilderie.</p> <p>The Steel Wings provided water to the Station homestead, ram sheds and dams along a 45km irrigation channel system until 1947. The windmill was damaged and collapsed in a severe windstorm in 1977 and the then owners of the Station (Dalgetys) offered it to Jerilderie as a historical exhibit.</p> <p>The windmill was relocated to Luke Park in Jerilderie in 1979 and restored to working order under the guidance of the Steel Wings Restoration Committee. Further restoration work was carried out in 1989 and 1998.</p> <p>The Steel Wings design is unconventional in that the entire tower and blade structure rotate on a central spindle held by stay wires at a shallow angle. This example stands 50 feet high, with a 25ft diameter wheel (or fan), and a 24ft long tail piece. It operates a 6" diameter plunger on a 19" stroke, lifting 2 gallons of water per revolution.</p> <p>Only six (6) Steel Wings Windmills were ever made, and this was the only working example Worldwide until 2004, when a second Steel Wings was re-erected at the township of Taroom in Queensland.</p>		
<b>Engineering Theme:</b>	Primary Industry, Farms & Stations, Windmills		
<b>Heritage Listing:</b>	None		
<b>References:</b>	<ul style="list-style-type: none"> <li>• Murrumbidgee Council website</li> <li>• Interpretive signage erected at the site.</li> <li>• <a href="https://en.wikipedia.org/wiki/Jerilderie">https://en.wikipedia.org/wiki/Jerilderie</a></li> </ul>		
<b>Nominated by:</b>	Chris Dahlitz		
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<b>EHA Branch Chair:</b>	Sydney	<b>Approval Date:</b>	18 February 2024



*Steel Wings Windmill, Luke Park, Jerilderie (photo by Chris Dahlitz)*



## ENGINEERING HERITAGE RECOGNITION PROGRAM



*Interpretive panel on-site (photo by Chris Dahlitz)*



*Upward View (photo by Chris Dahlitz)*





*Steel Wings base detail (photo by Chris Dahlitz)*



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*Pipework detail and Jerilderie Lake in background (photo by Chris Dahlitz)*